Appln. No. 09/624,239
Amdt. dated March 22, 2006
Reply to Office Action of September 22, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended)   A method of annunciating problems in a system, . comprising

receiving information from network components, said information representative of system conditions, and including alarm information associated with system fault events, performance degradation information, and service violation information,

correlating alarm information with performance degradation information and service violation information to provide identification of system problems, and to quantify said alarm information, performance degradation information and service violation information associated with said identified system problems, to produce problem priority information for said identified system problems; and

producing signals for concurrently annunciating said system problems and said problem priority information associated with said system problems and for annunciating at least one of alarm information, performance degradation information and service violation information associated with said system problems.

2. (Previously presented)   The method of claim 1 wherein producing problem priority information comprises quantifying a relative importance of said system problems.

3. (Previously presented)   The method of claim 2 further comprising determining a cost associated with at least one problem.

4. (Previously presented)   The method of claim 3 wherein determining the cost, comprises determining service level agreement penalties associated with breaches of service level agreement clauses.

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5.   (Previously presented)   The method of claim 1 further comprising determining performance degradation information and service violation information associated with a root cause of one of said plurality of system problems.

6.   (Currently amended)   The method of claim 5 further comprising receiving alarm information, from an alarm correlator, comprising an indication of an alarm associated with a root cause of a system problem.

7.   (Previously presented)   The method claimed in claim 1 wherein concurrently annunciating comprises concurrently annunciating for use by a display device for producing a display image.

8.   (Original)   The method of claim 7 further comprising enabling user selection of at least one of performance degradation information, alarm information and service violation information, for concurrent display with an associated system problem.

9.   (cancelled)

10.   (cancelled)

11.   (cancelled)

12.   (Currently Amended)   The method of ~~claim 11 further comprising~~ claim 1 wherein receiving said alarm information comprises receiving a plurality of alarm data units.

13.   (Currently Amended)   The method of ~~claim 11 further comprising~~ claim 1wherein receiving said performance degradation information comprises receiving a plurality of performance degradation data units ~~for providing said performance degradation information~~.

14.   (Currently amended)   The method of ~~claim 11 further comprising~~ claim 1 wherein receiving said service violation information comprises receiving a plurality of service violation data units ~~for providing service violation information~~.

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15.   (Currently amended)   The method of ~~claim 11 further comprising~~ claim 1 wherein the step of receiving information representative of system conditions, including alarm information associated with system fault events, performance degradation information, and service violation information comprises receiving alarm data units for providing alarm information, receiving performance degradation data units for providing performance degradation information and receiving service violation data units for providing service violation information.

16.   (Currently amended)   The method of claim 15 further comprising associating at least one of said performance degradation information and said service violation information with one of said identified system problems.

17.   (Currently amended)   The method of claim 16 further comprising producing signals representing a count of at least one of said alarm data units, said performance degradation data units and said service violation data units ~~related to said one of said~~ associated with identified system problems.

18.   (Previously presented)   The method of claim 1 wherein concurrently annunciating comprises concurrently annunciating to display a system problem hierarchy including at least one system problem, and at least one of performance degradation information, alarm information and service violation information associated with a selected one of said problem objects.

19.   (Previously presented)   The method of claim 1 further comprising transmitting said concurrently annunciated system problems and problem priority information as signals to a display device for use in producing a visual display.

20.   (Previously presented)   The method of claim 19 further comprising producing a display image in response to said signals.

21.   (Currently amended)   A method of annunciating problems in a system comprising:

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receiving information from network components, said information representative of system conditions, and including alarm information associated with system fault events, performance degradation information, and service violation information;

correlating alarm information with performance degradation information and service violation information ~~associated with~~ to identification of system problems, quantifying said alarm information, performance degradation information and service violation information associated with said identified system problems to produce problem priority information for said system problems; and concurrently visually annunciating said system problems and said problem priority information associated with said system problems.

22.   (Previously presented)   A computer readable medium encoded with instructions for directing a processor circuit to carry out the method of claim 1.

23.   (Canceled)

24.   (Currently amended)   An apparatus for annunciating problems in a system, comprising

a)   means for receiving data representative of system conditions, said data including , including alarm information associated with system fault events, performance degradation information, and service violation information associated with system problems;

b)   means for correlating said alarm information with performance degradation information and said service violation information to provide identification of system problems and produce problem priority information for said identified system problems; and

c)   means for concurrently annunciating said system problems and said problem priority information associated with said system problems.

25.   (Currently amended)   An apparatus for annunciating problems in a system, comprising:

a)   a receiver for receiving data representative of system conditions, said data including alarm information associated with system fault events, performance degradation information and service violation information associated with system problems;

b)   a signal generator including a processor in communication with said receiver for correlating said alarm information with performance degradation information and said

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service violation information, to identify system problems and quantifying said alarm information, performance degradation information and service violation information to produce problem priority information for said identified system problems and to concurrently annunciate said system problems and said problem priority information associated with said system problems.

26.   (Previously presented)   The apparatus of claim 25 wherein said processor circuit is configured to quantify a relative importance of said system problems.

27.   (Original)   The apparatus of claim 26 wherein said processor circuit is configured to associate a cost with at least one system problem.

28.   (Previously presented)   The apparatus of claim 27 wherein said processor circuit is configured to produce signals representing service level agreement penalties which are associated with breaches of service level agreement clauses.

29.   (Previously presented)   The apparatus of claim 25 wherein said signal processor circuit is configured to concurrently annunciate said performance degradation information and said service violation information as being associated with a root cause of one of said plurality of system problems.

30.   (Currently amended)   The apparatus of claim 29 wherein said receiver is configured to receive alarm information from an alarm correlator comprising an indication of an alarm associated with a root cause of a problem.

31.   (Original)   The apparatus claimed in claim 25 wherein said signal generator is operable to produce signals for use by a display device for producing a display image.

32.   (Original)   The apparatus of claim 31 wherein said signal generator is operable to produce signals for concurrently displaying with an associated system problem at least one of performance degradation information, alarm information and service violation information.

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33   (Original)   The apparatus of claim 32 wherein said signal generator
is operable to produce said signals for concurrently displaying said at least one of
performance degradation information, alarm information and service violation information in
response to user input.

34.   (Original)   The apparatus of claim 25 wherein said signal generator
is configured to produce signals for depicting at least one of performance degradation
information and service violation information.

35.   (Previously presented)   The apparatus of claim 34 wherein said receiver is
configured to receive data representing system fault events.

36.   (cancelled)

37.   (Currently amended)   The apparatus of ~~claim 36~~ claim 32 wherein said receiver
is configured to receive alarm information comprising a plurality of alarm data units.

38.   (Currently amended)   The apparatus of ~~claim 36~~ claim 32 wherein said receiver
is configured to receive performance degradation information comprising a plurality of
performance degradation data units for providing said performance degradation information.

39.   (Currently amended)   The apparatus of ~~claim 36~~ claim 32 wherein said receiver
is configured to receive service violation information comprising a plurality of service violation
data units for providing service violation information.

40.   (Currently amended)   The apparatus of ~~claim 36~~ claim 32 wherein said receiver
is configured to receive alarm data units for providing alarm information, receive performance
degradation data units for providing performance degradation information and receive service
violation data units for providing service violation information.

41.   (Currently amended)   The apparatus of claim 40 wherein said signal generator
is configured to correlate at least one of said alarm ~~information~~ data units, performance

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degradation ~~information,~~ data units and service violation units ~~with one of said~~ to identify system problems and associate said data units with said system problem.

42.   (Original)   The apparatus of claim 41 wherein said signal generator is configured to produce a count of at least one of said alarm data units, said performance degradation data units and said service violation data units related to said one of said system problems.

43.   (Previously presented)   The apparatus of claim 25 wherein said signal generator is configured to cause said signals to indicate a system problem hierarchy including at least one system problem, and a representation of at least one of performance degradation information, alarm information and service violation information associated with one of said system problems, selected by a user.

44.   (Original)   The apparatus of claim 25 further comprising a transmitter for transmitting said signals to a display device.

45.   (Currently amended)   A display apparatus for annunciating problems in a system, the apparatus comprising:
        a)   a receiver for receiving data representative of system conditions, said data including alarm information, performance degradation information and service violation information ~~associated with system problems~~;
        b)   a signal generator including a processor circuit in communication with said receiver to correlate said alarm information, performance degradation information and said service violation information, to identify system problems, to quantify alarm information, performance degradation information and service violation associated with said system problems to produce problem priority information for said system problems; and to concurrently annunciate said system problems and said problem priority information associated with said system problems; and
        c)   a display device for producing a visual image displaying said concurrently annunciated system problems and problem priority information.

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46.   (Currently amended)   A method of annunciating problems in a system, comprising correlating alarm information, performance degradation information and service violation information to identify associated with system problems, quantifying alarm information, performance degradation information and service violation associated with said system problems to produce problem priority information correlated to said system problems; and concurrently annunciating said system problems and said problem priority information associated with said system problems visually.

47.   (Currently amended)   A method of annunciating problems in a system, comprising correlating alarm information, performance degradation information and service violation information associated with system problems, to identify system problems, and quantifying said alarm information, performance degradation information and service violation to produce problem priority information correlated to said system problems; and concurrently visually annunciating said system problems and said problem priority information associated with said system problems, and producing signals which represent a cost associated with at least one problem.

48   (Currently amended)   An apparatus for annunciating problems in a system, comprising:

       a)   a receiver for receiving current data representative of system conditions, said current data including alarm information associated with system fault events, current performance degradation information and service violation information associated with system problems; and

       b)   a signal generator including a processor circuit in communication with said receiver to correlate said alarm information, performance degradation information and said service violation information, to identify system problems and to quantify alarm information, performance degradation information, and service violation information to produce problem priority information correlated to said system problems; and to concurrently annunciate said system problems and said problem priority information correlated with said system problems.

49.   (Currently amended)   An apparatus for annunciating problems in a system, comprising:

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a) a receiver for receiving current data representative of system conditions, said current data including alarm information associated with system fault events, performance degradation information and service violation information ~~associated with system problems~~; and

b) a signal generator including a processor circuit in communication with said receiver to correlate said alarm information, performance degradation information and said service violation information, to identify system problems, and to quantify said data representative of system conditions to produce problem priority information correlated to said system problems; and to concurrently annunciate said system problems and said problem priority information ~~associated~~ correlated to said system problems, and wherein said signal generator comprises means for associating a cost with at least one system problem.